

REMARKS

Claims 1 through 17, as amended, are pending herein.

In the Action, the Examiner has effectively maintained his position with respect to the Lin et al. reference and has indicated that there is essentially no merit in the fact that Lin et al. teaches the monitor diode being integrated to the VCSEL while the instant application teaches that these are isolated. The Examiner's position is that constructing a formerly integral structure in various elements is within routine skill of one skilled in the art.

Claims 1 through 7, 9 through 13 and 15 through 17 have been indicated to be anticipated by Lin et al. and claims 8 and 14 have been indicated to be obvious in view of this reference.

Applicant has now further reduced the scope of the claims to indicate that the surface emitting laser consists essentially of the elements provided in claim 1 and claim 11 has been amended to be dependent on claim 1.

Applicant would respectfully request the Examiner to reconsider his position regarding the Lin et al. reference. It is Applicant's submission that isolation is not a triviality, but rather a significant advancement which improves the performance of the structure. Applicant submits that separation results in the best performance for each component and therefore the best performance for the combination. In the Lin et al. arrangement, performance is compromised by integration. This can be seen by the following complications. The Lin et al. structure introduces a p-i-n or a n-i-p diode into the VCSEL, which inherently reduces the optical output. It is evident that at least a portion of the optical power will be absorbed by the p-i-n structure. As a further complication, the presence of any such structure creates parasitic capacitance which reduces the

frequency of the VCSEL. Further, it is indicated in the disclosure that the Lin et al. arrangement incorporates a Schottky diode. The presence of this structure increases power loss which, in turn, relates to variations in the monitor detector signal and in the VCSEL optical output.

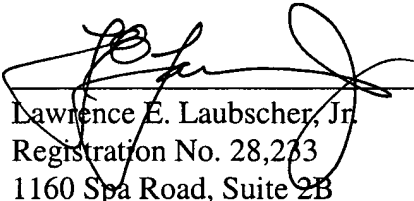
Applicant has attempted to provide the Examiner with a reasonable position regarding this prior art and reconsideration is respectfully requested.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "**Version with markings to show changes made.**"

It is now believed that the application is in condition for allowance and early action to this end is solicited.

Respectfully submitted,

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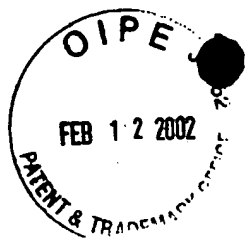
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I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to: BOX AF, Commissioner for Patents, Washington, D.C. 20231 on January 23, 2002.

Geri Spicknall

Signature





**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**In the claims:**

Claims 1 and 11 have been amended as follows:

1. (Amended) A surface emitting laser, [comprising:] consisting essentially of:  
a plurality of spaced apart mirrors;  
a light amplifying region between said mirrors;  
a substrate; and  
a photon transparent ohmic contact for passing light energy therethrough whereby light emission through said surface emitting laser may be monitored.

11. (Amended) A method for monitoring light emission from a surface emitting laser[, said laser including:  
a plurality of spaced apart mirrors;  
a light amplifying region between said mirrors;  
a substrate;  
a photon transparent ohmic contact;] comprising:  
providing a surface emitting laser as set forth in claim 1;  
contacting said laser with a source of energy to generate light; and  
monitoring emitted light transmitted through said transparent ohmic contact.